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10/731,680	12/09/2003	Lilia P. Burleva	85754JLT	6376

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EXAMINER

CHEA, THORL

ART UNIT

PAPER NUMBER

1752

DATE MAILED: 02/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/731,680

Applicant(s)

BURLEVA ET AL.

Examiner

Thorl Chea

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 09 December 2003.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-27 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-27 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 12092003.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Specification*

1. Claim 2 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 2 is directed to the coating the photothermographic emulsion onto a support to form a photothermographic material rather than limiting the photothermographic emulsion in claim 1.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-4, 9-15, 23-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Winslow et al (US Patent No. 5,891,615), Riester et al (US Patent No. 3,895,951), and Morgan et al (US Patent No. 3,457,075).

Winslow et al discloses a process substantially as claimed. See the process for preparing a photothermographic emulsion in columns 50-52, claims 1-19 wherein the process comprising the step of providing the silver halide grains and a non-photosensitive silver source, and chemically sensitize the silver halide grains by decomposing the organic sulfur-containing compound in an oxidizing environment such as piridinium hydrobromide perbromide compound; the hydrobromic acid salts of nitrogen-containing heterocyclic rings compound in column 9,

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lines 55-67 to column 9, line 1-2.; the process of forming silver halide by "in-situ" and "ex-situ" in column 3, lines 15-55; the photothermographic constructions in column 19, lines 57-67 to column 20; the photographic emulsions and photothermographic material in Examples 1-34 in column 1-50; the silver halide including silver bromide in column 12, lines 45-55; and the sulfur containing compound known as merocyanine dye in columns 11-12. In the process of forming the photographic emulsion in column 27, the preformed silver halide emulsion, full silver dispersion soap, the chemically spectrally sensitizing dye (CS-1) and pyridinium hydrobromide perbromide, and binder such as Butvar are used. In column 13, lines 37-50, it is disclosed that it is effective to use an in situ process, i.e., in which a halogen-containing compound is added to an organic silver salt to partially convert the silver of the organic silver salt to silver halide.

Morgan in column 3, lines 65-75 to column 4, lines 1-22 discloses the formation of silver bromide by in situ using source of halide ion such as ammonium bromide with silver ions of organic silver salt. It discloses that "surprisingly, the in situ formation of silver chloride or bromide, by reaction of halide ion with silver ions of organic silver salt, enhances the image forming capability of the composition enormously, and by far beyond anything available by simple addition of preformed silver halide, so that a true photographic or picture-taking capability is made possible.

Winslow et al may not disclose the step of converting some of the reducible silver ions in said non-photosensitive silver source of reducible silver ions into photosensitive silver halide grains; but, it has been known in Morgan discloses that "surprisingly, the in situ formation of silver chloride or bromide, by reaction of halide ion with silver ions of organic silver salt, enhances the

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image forming capability of the composition enormously, and by far beyond anything available by simple addition of preformed silver halide, so that a true photographic or picture-taking capability is made possible. Therefore, It would have been obvious to the art the time the invention was made to include the in-situ processing step known in Morgan et al in the process taught in Winslow et al with a reasonable expectation of achieving a photothermographic material with surprising image forming capability, and thereby provide a process as claimed.

4. Claims 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Winslow et al (US Patent No. 5,891,615) and Morgan et al (US Patent No. 3,457,075) as applied to claims 1-4, 9-15 above, and further in view of Riester et al (US Patent No 3,895,951).

Riester a phosphine sulfide to increase and stabilize the silver halide emulsion that spectrally sensitizes with a merocyanine dye. See the compounds in column 1, lines 55-60, the description of the substituents associated therewith especially the group such as -NH-CO- in column 2, lines 40-45, exemplified compound in columns 3-10, especially the compound of formula 7, in column 3. Thus, Riester discloses the compound having a phosphine sulfide compound including the compound used in the present claimed invention. It would have been obvious to the art the time the invention was made to use the sulfur-containing compound taught Riester et al to increase and stabilize the silver halide spectrally sensitize with merocyanine dye taught in Winslow, and thereby provide a process as claimed.

5. Claims 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over combination of Winslow et al (US Patent No. 5,891,615) and Morgan et al (US Patent No. 3,457,075 as applied to claims 1-13, 15-17, 23-27 above, and further in view of Simpson et al (US Patent No. 6,440,649).

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Simpson et al discloses the use of a phosphor to provide an increase imaging sensitivity and image contrast of a photothermographic material. It would have been obvious to the worker of ordinary skill in the art at the time the invention was made to use a phosphor taught in Simpson et al in the photothermographic emulsion obtained by a combination of Winslow et al (US Patent No. 5,891,615), Riester et al (US Patent No. 3,895,951), and Morgan et al (US Patent No. 3,457,075), and thereby provide a process as claimed.

6. Claims 17-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Winslow et al (US Patent No. 5,891,615) and Riester et al (US Patent No. 3,895,951).

Winslow et al discloses a process substantially as claimed. See the process for preparing a photothermographic emulsion in columns 50-52, claims 1-19 wherein the process comprising the step of providing the silver halide grains and a non-photosensitive silver source, and chemically sensitize the silver halide grains by decomposing the organic sulfur-containing compound in an oxidizing environment such as piridinium hydrobromide perbromide compound; the hydrobromic acid salts of nitrogen-containing heterocyclic rings compound in column 9, lines 55-67 to column 9, line 1-2.; the process of forming silver halide by "in-situ" and "ex-situ" in column 3, lines 15-55; the photothermographic constructions in column 19, lines 57-67 to column 20; the photographic emulsions and photothermographic material in Examples 1-34 in column 1-50; the silver halide including silver bromide in column 12, lines 45-55; and the sulfur containing compound known as merocyanine dye in columns 11-12. In the process of forming the photographic emulsion in column 27, the preformed silver halide emulsion, full silver dispersion soap, the chemically spectrally sensitizing dye (CS-1) and piridinium

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hydrobromide perbromide, and binder such as Butvar are used. The decomposition of the sulfur-containing compound is from 20 °C to 40°C within 60 mn. See column 27, example 1 and column 52, claims 14-17.

Riester a phosphine sulfide to increase and stabilize the silver halide emulsion that spectrally sensitizes with a merocyanine dye. See the compounds in column 1, lines 55-60, the description of the substituents associated therewith especially the group such as -NH-CO- in column 2, lines 40-45, exemplified compound in columns 3-10, especially the compound of formula 7, in column 3 which same as the compound PS-15 claimed in claim 15. Thus, Riester discloses the compound having a phosphine sulfide compound including the compound used in the present claimed invention.

Winslow et al discloses a process substantially as claimed except the use of sulfur-containing compound of formula (PS), but the compound has been known in Riester et al that the phosphine sulfide to increase and stabilize the silver halide emulsion that spectrally sensitizes with a merocyanine dye. It would have been obvious to the art the time the invention was made to use the sulfur-containing compound taught Riester et al to increase and stabilize the silver halide spectrally sensitize with merocyanine dye taught in Winslow et al, and thereby provide a process as claimed.

### ***Double Patenting***

7. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

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A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

8. Claims 1-27 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-19 of U.S. Patent No. 5,891,615 (Winslow et al) in view of Morgan et al (US Patent No. 3,457,075 and Riester et al (US Patent No. 3,895,951). The invention claimed in Winslow et al may not include the step of converting some of the reducible silver ions in said non-photosensitive silver source of reducible silver ions into photosensitive silver halide grains; but, it has been known in Morgan discloses that "surprisingly, the in situ formation of silver chloride or bromide, by reaction of halide ion with silver ions of organic silver salt, enhances the image forming capability of the composition enormously, and by far beyond anything available by simple addition of preformed silver halide, so that a true photographic or picture-taking capability is made possible. Therefore, It would have been obvious to the art the time the invention was made to include the in-situ processing step known in Morgan et al in the process taught in Winslow et al with a reasonable expectation of achieving a photothermographic material with surprising image forming capability, and thereby provide a process as claimed. Moreover, Riester a phosphine sulfide to increase and stabilize the silver halide emulsion that spectrally sensitizes with a merocyanine dye, it would have been obvious to the art the time the invention was made to use the sulfur-containing compound taught Riester et al to increase and stabilize the silver halide spectrally sensitize with merocyanine dye claimed in Winslow et al, and thereby provide a process as claimed.

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9. Claims 1-27 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-23 of copending Application No. 10/731,462. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims contain similar steps and the same sulfur containing compound. The converting the reducible ion to silver halide grains may occur in different order, but the worker of ordinary skill in the art would have expected the silver halide formation in either step of the process.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

#### ***Conclusion***

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thorl Chea whose telephone number is (571) 272-1328. The examiner can normally be reached on 9 AM-5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia H Kelly can be reached on (571)272-1526. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

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system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tchea *th*  
February 2, 2005

Thorl Chea  
Primary Examiner  
Art Unit 1752

*Thorl Chea*